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In Back Braces . . .

NEW COMPONENTS ENHANCE PAIN RELIEF

BACK BRACE ADJUNCTS

By
Herbert E. Hipps, M.D.
(Waco, Texas)

ONE of the purposes for which a back brace is applied is to relieve pain. It does this by supporting the back and by preventing motion in it.

Any one of the following additions to a back brace greatly enhances its pain relieving ability. I have used all of these at various times during the last five years and have found them quite satisfactory.

Pressure Pad Principle. Construct a fairly thick pad of felt, about 4 x 5 inches in size. Attach elastic straps to it, and place it onto the brace in such a way that when the brace is on, firm constant pressure is made by this pad over the area of maximum pain, Figure one, A. Pressure alone directly over a painful area helps relieve pain.

Pressure Pad Plus Counter-Irritation. This same pressure pad may be used with an extra piece of sani-sheet fixed to the anterior surface of it with four snaps, Figure one, B. The sani-sheet may be covered with a counter-irritant salve, snapped onto the front of the pad and the pad placed over the painful area but directly against the bare skin. Sani-sheet is used because the salve will not penetrate it and soil the felt pressure pad. It is fixed with snaps to the pad because, on some days, the patient may not want to use the salve and he then can remove the sani-sheet cover.

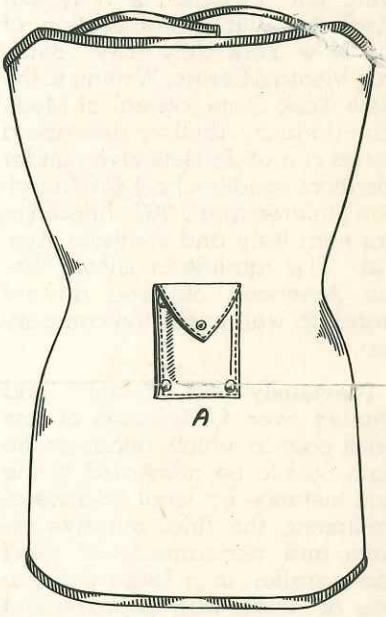
In this instance the patient feels both the pain relieving effect of local pressure plus counter-irritation.

Heat Principle. A small leather pocket is made and is placed on the brace as in Figure one, C and Figure 2, A, in such a way as to lay over the painful part of the back. A pocket warmer is placed therein to furnish heat to the patient's back over his most painful site.

The pocket warmer is perfectly safe, as there is no open flame in it and it stays hot for eight to ten hours. It may be secured from any sporting goods house.

In this instance pain relief occurs from the heat and the localized pressure made by the heat unit.—1612 Columbus Ave.

Fig. 2. (A) Pocket warmer in leather pocket on a celluloid brace.



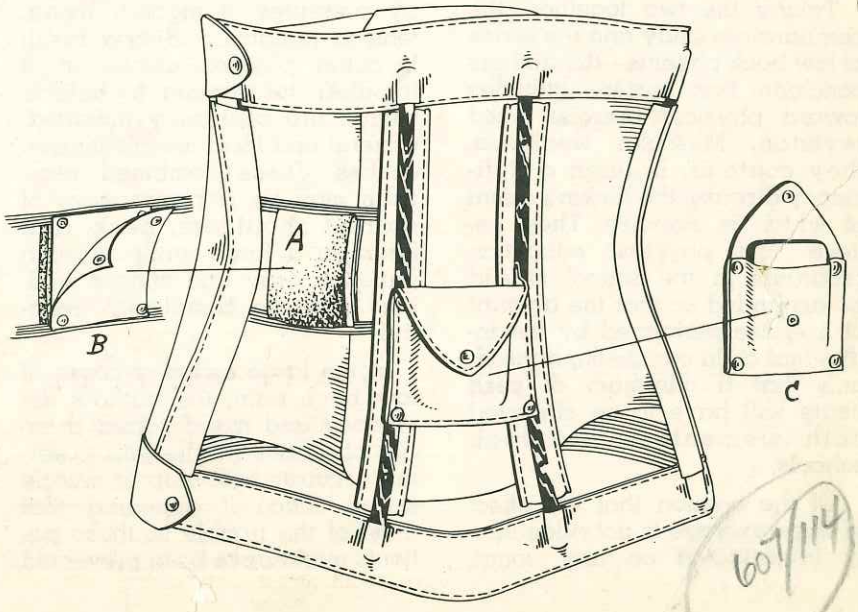


Fig. 1 (A) Showing felt pressure pad in place. It may be placed on either side or in midline, wherever maximum pain is located. (B) Showing sani-sheet affixed to felt pad on anterior surface with snaps. (C) Showing leather pocket and warmer inside.

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STUDIES RELATE LOW BACK PAIN TO TENSION AND EXERCISE DEFICIENCY

Compare U.S. With European School Children

BRACE makers, who share with specialists in orthopaedics and physical medicine an acute awareness of the prevalence of low back pain in the adult population, might find some interesting comments on this civilized disease in a paper written by Hans Kraus, M.D. and Ruth P. Hirschland.

Both authors are associated with the Institute of Physical Medicine and Rehabilitation of the New York University—Bellevue Medical Center. Writing in the New York State Journal of Medicine (January 15) they describe a series of muscle tests given under identical condition to 4,458 American children and 1,987 children in northern Italy and southern Austria. The tabulation shows that the American children do not stand up well under the comparison.

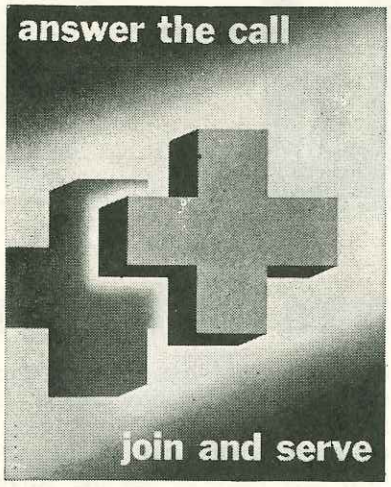
Previously the authors had studied over 4,000 cases of low back pain in which, although the pain had to be alleviated in the first instance by local or general treatment, the final curative results and permanence of relief ran parallel, in a large percentage of cases, with improvement of muscular strength. The patients recuperated as their muscle strength improved.

Taking the two together—the comparative study and the series of low-back patients—the authors conclude that current attitudes toward physical exercise need revision. Muscular weakness, they contend, is often a deficiency disease, the lacking agent of which is exercise. They believe that physical education programs in the school should be expanded so that the amount of exercise performed by the individual child can be supervised, and that a minimum of such hours will have to be observed both elementary and high schools.

Of the opinion that the effect of underexercise is not adequately investigated on any count, by muscular fitness, the authors decided to make the comparative statistical study of healthy school children.

For tests failed, the incidence was 8.5 per cent for the European children, while for the American children it was 78.3 per cent.

Failing one test, the percentages were European 8.2; American 56.6. Failing 2 or more tests, the rate was 0.3 per cent for the European children and 16.4 per cent for the American children.



they introduce another interesting idea on the possible cause of low back pain—also related to underexercise—that of tension. This rationale is based on the brilliant studies of the noted physiologist, W. B. Cannon, on bodily reactions to fear and anger.

Cannon pointed out that man still retains his primitive emotions, and that in the days of the jungle, fear or anger prepared the body for flight or combat, the very act of which constituted an act of adjustment in restoring the bodily equilibrium. But in a civilized era, the emotions remain but the urge to flight or combat is suppressed.

If the individual is prevented from releasing, through physical exercise, the energies generated by pressures of modern living, tension remains and may result in actual physical discomfort. If impulses to respond to outside stimuli are constantly thwarted, general and local muscle tension ensues. These combined reactions may be a basic cause of painful shoulders, neck, and back. In a large group of such patients, x-ray and clinical findings may be completely negative.

In the large series of cases of low back pain, the authors developed and standardized a series of simple muscle tests to permit accurate follow-up of muscle status. Since it appeared that most of the trouble in these patients might have been prevented

Francis to Evaluate Polio Vaccine Studies

The National Foundation News for March announces that Dr. Thomas Francis, Jr., epidemiologist of the University of Michigan, will direct evaluation of the field studies with the new anti-poliomyelitis vaccine. The plan of the study calls for the usual technics of giving a certain number of children the active vaccine, an equivalent number a placebo (an inactive substance that looks like the vaccine) and making statistical comparisons with both groups against a certain number of children of about the same age in the same area who receive neither, as well as comparisons against each other.

In the same issue, a signed article by Dr. Francis discusses the possibility of finding a simple medicinal substance that will be active against poliomyelitis. Recently developed methods of growing the virus in the test tube make possible greatly expanded studies of the effects of various chemicals, biological substances, or nutritional materials on the virus. For the first time, he says, a compound has been shown to delay the multiplication of poliomyelitis virus not only in the test tube, but in living experimental animals—mice and monkeys.

Even though these early experiments are far from conclusive, Dr. Francis says they give encouragement both to the effort and to the probability that a simple remedy will be found. Such an outcome, he said, would be a great contribution to the entire field of virus diseases.

Clipping Corner

Grants. Fellowships for students having completed a minimum of two years of medical school with eight weeks of free time (all in one period) for extra-curricular study have been announced by the National Foundation for Infantile Paralysis for 1954. The honorarium is 400 dollars, for which there will be three types of fellowships: research in basic sciences related to medicine; physical medicine and rehabilitation; or public health and preventive medicine . . . The University of Illinois has received a grant of over 28,000 dollars from Muscular Dystrophy Associations of America, Inc. for investigation into the cause and cure of muscular dystrophy. Source of the money is the 3,350,000 dollars raised by the letter carrier's fund march in November, 1953 . . . A prize of 500 dollars is being offered by the American Congress of Physical Medicine and Rehabilitation for what is adjudged the best essay on any subject relating to physical medicine and rehabilitation. The announcement states that "while the contest is open to anyone, it is primarily directed to medical students, internes, residents, graduate students in pre-clinical sciences, and graduate students in physical medicine and rehabilitation." Full information may be had from the offices of the Congress, 30 North Michigan Ave., Chicago 2, Ill. Manuscripts must be submitted not later than June 1, 1954.

Publications. The name and face of the Children's Bureau publication, The Child, has been changed, according to a recent announcement. The new name of the periodical will be CHILDREN, and its content will be beamed at persons professionally interested in child health and welfare. The magazine will be published every two months. Annual subscriptions will be $1.25, and may be had from the U.S. Government Printing Office, Division of Public Documents, Washington 25, D.C.

The fifth in a series of rehabilitation monographs, "Braces, Crutches, and Wheelchairs: Mode of Management," has been announced by the Institute of Physical Medicine and Rehabilitation of the N.Y. University—Bellevue Medical Center. The pamphlet has been prepared by George G. Deaver, M.D. and Anthony L. Brittis, M.D. For information: 400 East 34th St.

Summer Courses. The orthopaedically handicapped and the cerebral palsied will be included in seven graduate classes in a teacher education demonstration school for exceptional children being offered this summer by Hunter College of the City of New York, 695 Park Ave., New York 21. The sessions will extend from July 12 to August 2.

Meetings. Scheduled for April 7 was a conference on the effects

(OVER)

N.Y. INSTITUTE REMODELS BRACE SHOP

After two years of staff planning and evaluating past experience, the Prosthetic and Orthopaedic Appliance Shops at the New York Institute for the Crippled and Disabled have been renovated to provide the best possible conditions both for patients and technicians.

The renovation was one phase of an extensive Institute-wide modernization job. The new brace shop facilities provide air-conditioned fitting rooms apart from the shop areas, with separate accommodations for men, women, and children.

Charles Goldstine, director of the shops, points out that activities of the department are integrated with the over-all rehabilitation services of the Institute, not only in treatment but also in the teaching and research phases of its work. The staff, he says, participates in a broad range of activities conducted by the Institute jointly with Columbia University and the Columbia-Presbyterian Medical Center. The accompanying picture shows one portion of the new shop.

of rehabilitation in reducing compensation costs at the Institute for the Crippled and Disabled, New York City. The general plan of the conference called for discussion of the basic problems of rehabilitation from the viewpoint of the insurance company, the employer, and the employee. A panel of medical experts representing the carrier, the government, and the rehabilitation center was scheduled to discuss proper timing and strategic use of rehabilitation technics to achieve the best results. Incidentally, the Institute has recently issued in pamphlet form a series of papers presented at the second annual conference and demonstration for compensation insurers and physicians sponsored by the Institute in the spring of 1953. Entitled "The Rehabilitation of Industrial Hand and Arm Disabilities," the pamphlet contains eleven papers covering various phases of the management of such injuries, medical, vocational, and social.

How Family Faced Problems Of Armless Child

Billy Bruckner is an unusually handsome youngster who was four years old in March. The delight in living that beams from his face in his photographs is no small part of his attractiveness, and it reflects the confidence in the goodness of things one finds in all fortunate youngsters who are brought up in the happy shelter of secure family life.

But there is one difference, and that is the substance of this book (Triumph of Love, by Leona S. Bruckner, Simon and Schuster $3.00). Billy was the victim of an accident before he was born which deprived him of his arms: a rare sort of accident, but one that has happened to children and their parents before, and will happen again.

Whenever it happens, certainly it cannot be brushed lightly aside. As it was for the Bruckners, it will be a calamitous event, bringing with it an avalanche of problems likely to try the strongest of souls. But it is a calamity that must be faced, and how it is faced will profoundly affect not only the innocent young victim, but the life of the parents and the entire family.

This book is the story of that kind of struggle. It now looks as though the Bruckner battle were won: Billy learned to walk, balancing himself without the important help of the arms, and he actually could roller skate at the age of three. When he grows older, a pair of artificial arms will make his handicap less conspicuous. After the early days of fear and doubt, the Bruckners now have no more qualms about the future of Billy than they would for that of any other youngster.

Rehab Places Over 61,000 In Gainful Work

More than 60,000 disabled persons have been placed in jobs for the third successive year under the federal-state rehabilitation program, Mary E. Switzer, Washington, D. C., announces. Miss Switzer is director of the office of vocation rehabilitation in the Department of Health, Education, and Welfare.

At the end of the fiscal year (June 30, 1953), 61,308 had been restored to a self-supporting status. According to the announcement, more than a fifth had been on public relief rolls. Whereas it would cost 8 million dollars to keep them on relief a year, the initial cost of rehabilitation was about 3 million dollars. From the taxes these people will pay alone, the entire federal cost of rehabilitating them will be paid in less than three years. It is pointed out that the states contributed almost 12 million dollars to the total program for the year.

The picture shows a mobile plywood chair designed by Harry P. Speer of Cedar Rapids, Iowa, whose son and three grandchildren were crippled by infantile paralysis. Equipped with rubber-tired wheels, the chair has the advantage of easy moveability while at the same time putting the articles of play, eating, and learning within easy reach. The table top is removable. Under the seat is a storage section for toys and other materials.

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